

Application No.: 09/672,803
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REMARKS

Claims 32-53 and 58-65 remain pending in the application. Claims 32-37, 50-53, and 58-59 have been amended without introduction of new matter. Favorable reconsideration is respectfully requested in view of the above amendments and the following remarks.

The Office's indications that claims 38-49 and 61-65 are allowable, and that claims 35, 50-53, and 59 define allowable subject matter are noted with appreciation. In response, claims 35, 50-53 and 59 have been rewritten in independent form including all of the limitations of the base claims and all intervening claims. In view of these amendments, it is believed that claims 35, 50-53, and 59 are now also allowable.

Claims 32-34, 36, 37, 58 and 60 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Carley et al., "High-Speed Low-Power Integrating CMOS Sample-and-Hold Amplifier Architecture", IEEE 1995 CUSTOM INTEGRATED CIRCUITS CONFERENCE, pp. 543-546 (henceforth, "Carley et al."). This rejection is respectfully traversed.

As now amended, independent claim 32 defines a charge sampling circuit that includes, *inter alia*, "an active integrator for integrating directly the analog input signal during a sampling phase" Independent claim 36 has been similarly amended to define a differential charge sampling circuit comprising first and second charge sampling circuits having, respectively, first and second "active" integrators; and independent method claim 58 has been amended to require "using an active integrator to integrate directly an analog input signal during a sampling phase" Thus, where amendments have been made to these claims, the generic terms "integrator" and "integrating" (which encompass the use of passive or active integrators) have been replaced by references to active integrators.

Dependent claims 33, 34, and 37 have been similarly amended to accommodate the changes to their respective base claims.

The specification is replete with support for these amendments. For example, Figures 14A and 14B, as well as the supporting text on page 16 disclose active integrators for improving output swing and linearity. Figure 14A shows an exemplary single ended active integrator 29 that comprises differential-in-single-out amplifier 30, an inverter 35, a capacitor 31, and switches 32, 33 and 34, as connected. In another example, Figure 14B illustrates a differential active integrator 36 that comprises differential-in-differential-out amplifier 37, two capacitors 31a and 31b, an inverter 35, and switches 32a, 32b, 33a, 33b, 34a, and 34b.

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As stated on page 16, lines 24, "It works basically in the same way as the integrator 29 except uses a differential input signal and gives differential outputs. The integrator 29 can replace the integrator 3 in FIG 1A while the integrator 36 can replace the integrator 10 in FIG. 3."

Thus, the application clearly teaches that incorporating an active integrator or active integrators into the invention can improve sampling circuit performance significantly.

It is well known that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). In the present instance, claims 32-34, 36-37, 58, and 60 are not anticipated by Carley et al. at least because Carley et al. fail to disclose or even suggest "an active integrator" or "using an active integrator to integrate."

For at least the foregoing reasons, independent claims 32, 36, and 58, as well as the dependent claims 33-34, 37, and 60 are believed to be novel over the subject matter disclosed in the Carley et al. document. Accordingly, it is respectfully requested that the rejection of claims 32-34, 36, 37, 58, and 60 under Section 102 be withdrawn.

The application is believed to be in condition for allowance. Prompt notice of same is respectfully requested.

Respectfully submitted,

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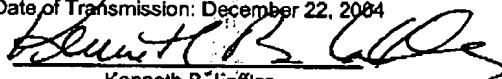
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